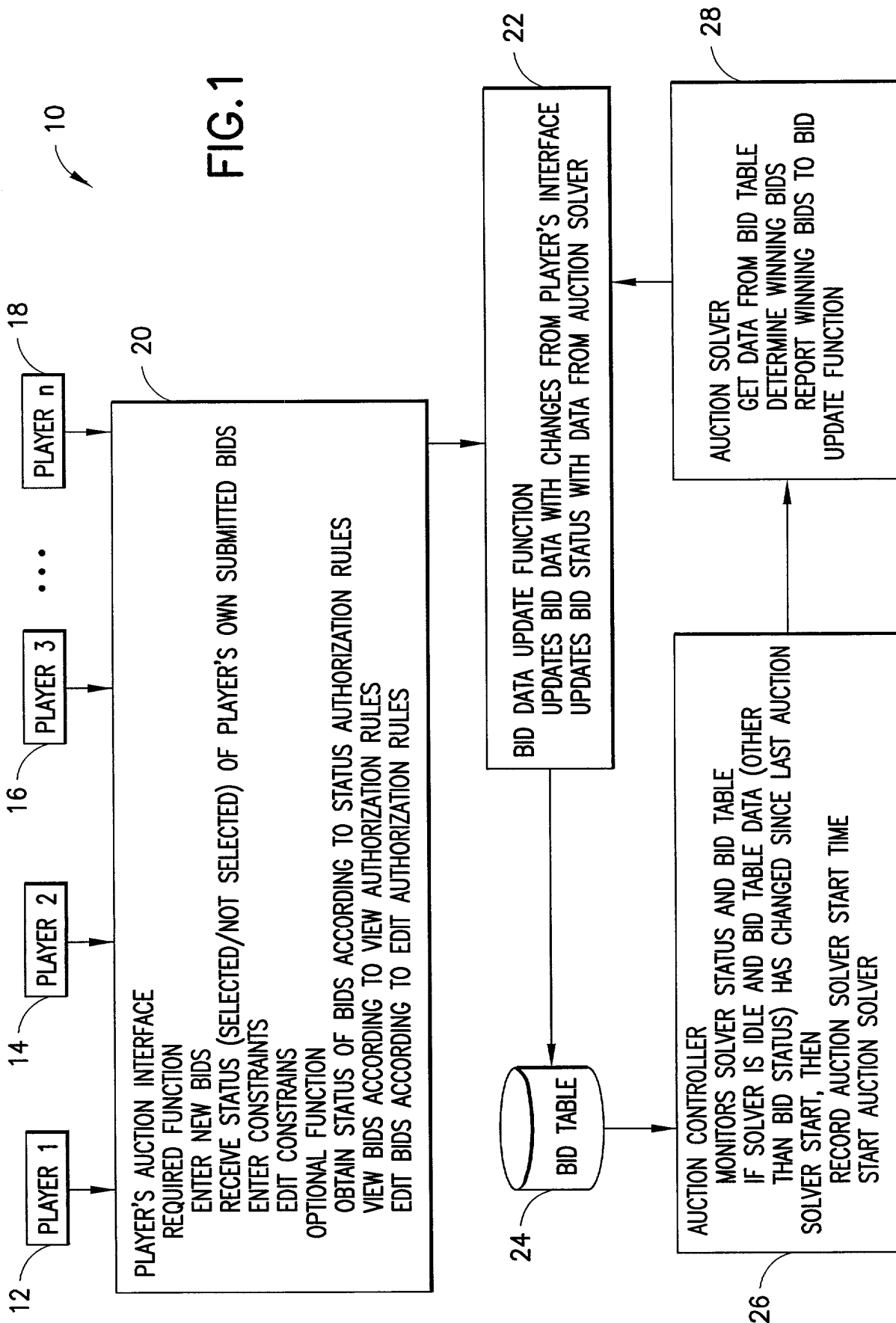


FIG. 1



ADD CONSTRAINT

BUDGET

MIN/MAX QTY

PRECEDENCE

LINEAR

ITEM	BID VALUE	STATUS
1	93	SELECTED
2	43	UNSELECTED
3	21	SELECTED
4	17	UNSELECTED
5	29	UNSELECTED

BASIC BID DATA

EDIT CONSTRAINT

SET	BUDGET
1,2,3	120
3,4,5	50

BUDGET CONSTRAINTS

ADD BID

ITEM	PRECEDENCE SET
3	1
3	2, 4

PRECEDENCE CONSTRAINTS

MIN QTY	SET	MAX QTY
2	1,2,3,4	
	2,4,5	2

QUANTITY CONSTRAINTS

ITEM	COEF	COEF
1	10	10
2	10	-10
3	20	10
4	40	-10
5		10
TOTAL	60	20

LINEAR CONSTRAINTS

FIG.2a

ADD CONSTRAINT
BUDGET
MIN/MAX QTY
PRECEDENCE
LINEAR

ITEM	BID VALUE	STATUS
3	43	UNSELECTED
4	29	SELECTED
5	31	SELECTED
6	12	SELECTED
7	17	UNSELECTED

BASIC BID DATA

EDIT CONSTRAINT

SET	BUDGET
5,6,7	50

BUDGET CONSTRAINTS

ADD BID

ITEM	COEF	COEF
3	20	15
4	30	18
5	21	13
6		17
7	30	14
TOTAL	50	48

LINEAR CONSTRAINTS

FIG.2b

$$\text{MAX } 93x_{1,1} + 43x_{1,2} + 21x_{1,3} + 17x_{1,4} + 29x_{1,5} + 43x_{2,3} + 29x_{2,4} + 31x_{2,5} + 12x_{2,6} + 17x_{2,7}$$

$$\text{SUBJECT TO } x_{3,1} + x_{3,2} \leq 1$$

$$x_{4,1} + x_{4,2} \leq 1$$

$$x_{5,1} + x_{5,2} \leq 1$$

$$93x_{1,1} + 43x_{1,2} + 21x_{1,3} \leq 120$$

$$21x_{1,3} + 17x_{1,4} + 29x_{1,5} \leq 50$$

$$x_{1,2} + x_{1,4} + x_{1,5} \leq 2$$

$$2z_{1,1}^{\text{Min}} \leq x_{1,1} + x_{1,2} + x_{1,3} + x_{1,4}$$

$$x_{1,1} \leq z_{1,1}^{\text{Min}}$$

$$x_{1,2} \leq z_{1,1}^{\text{Min}}$$

$$x_{1,3} \leq z_{1,1}^{\text{Min}}$$

$$x_{1,3} \leq z_{1,3,1}^{\text{P}} + z_{1,3,2}^{\text{P}}$$

$$z_{1,3,1}^{\text{P}} \leq x_{1,1}$$

$$2z_{1,3,2}^{\text{P}} \leq x_{1,2} + x_{1,4}$$

$$10x_{1,1} + 10x_{1,2} + 20x_{1,3} + 40x_{1,4} \leq 60$$

$$10x_{1,1} - 10x_{1,2} + 10x_{1,3} - 10x_{1,4} + 10x_{1,5} \leq 20$$

$$31x_{2,5} + 12x_{2,6} + 17x_{2,7} \leq 50$$

$$20x_{2,3} + 30x_{2,4} + 21x_{2,5} + 30x_{2,7} \leq 50$$

$$15x_{2,3} + 18x_{2,4} + 13x_{2,5} + 17x_{2,6} + 14x_{2,7} \leq 48$$

$$x_{1,1}, x_{1,2}, x_{1,3}, x_{1,4}, x_{1,5} \in \{0, 1\}$$

$$x_{2,3}, x_{2,4}, x_{2,5}, x_{2,6}, x_{2,7} \in \{0, 1\}$$

$$z_{1,2}^{\text{Min}}, z_{1,3,1}^{\text{P}}, z_{1,3,2}^{\text{P}} \in \{0, 1\}$$

FIG.3a (NUMERAL 34)

095033-07101
TOTAL 20 E8E05860

FIG.3b (NUMERAL 36)

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BID DATA INCLUDING
PLAYER CONSTRAINTS

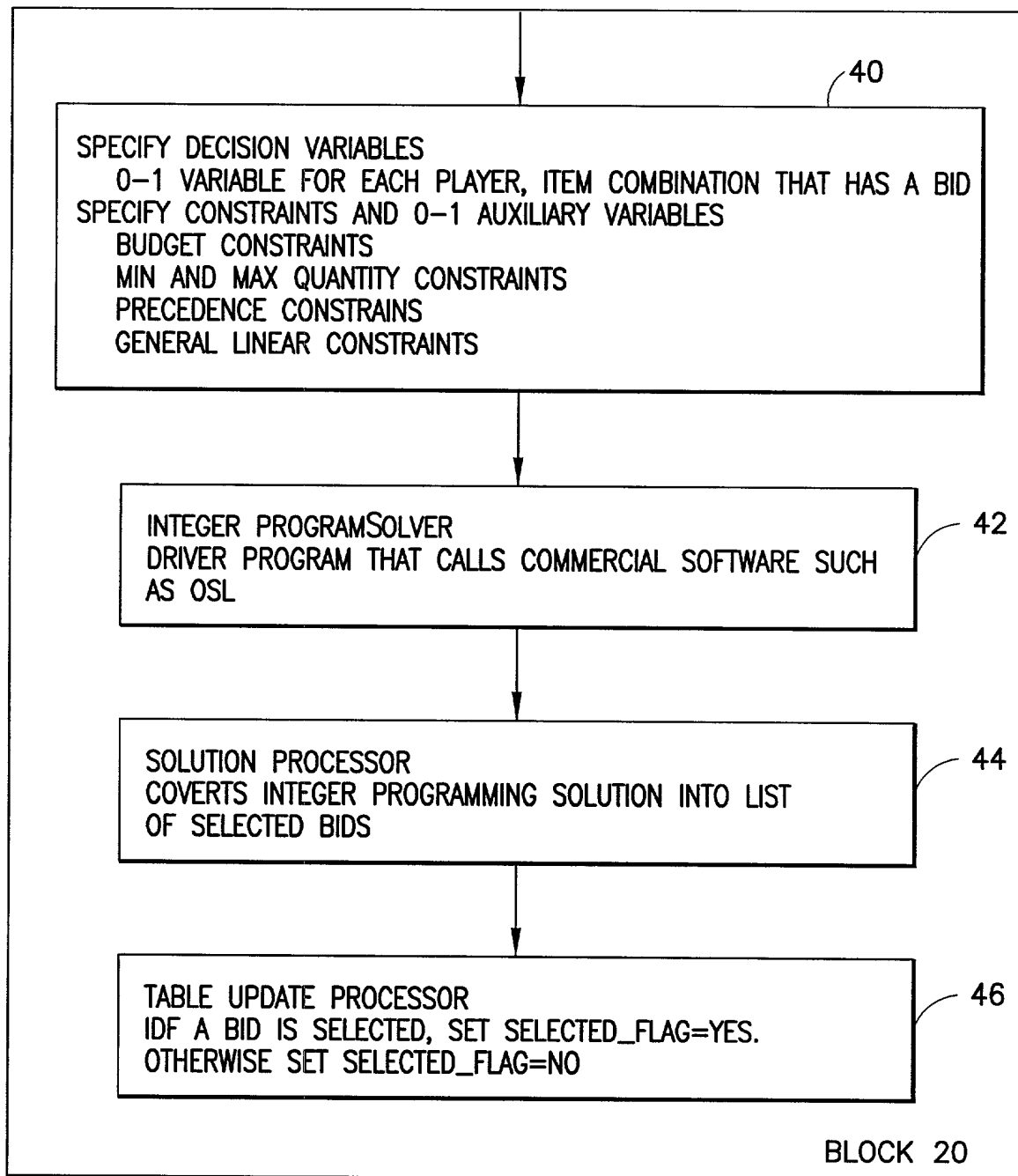


FIG.4

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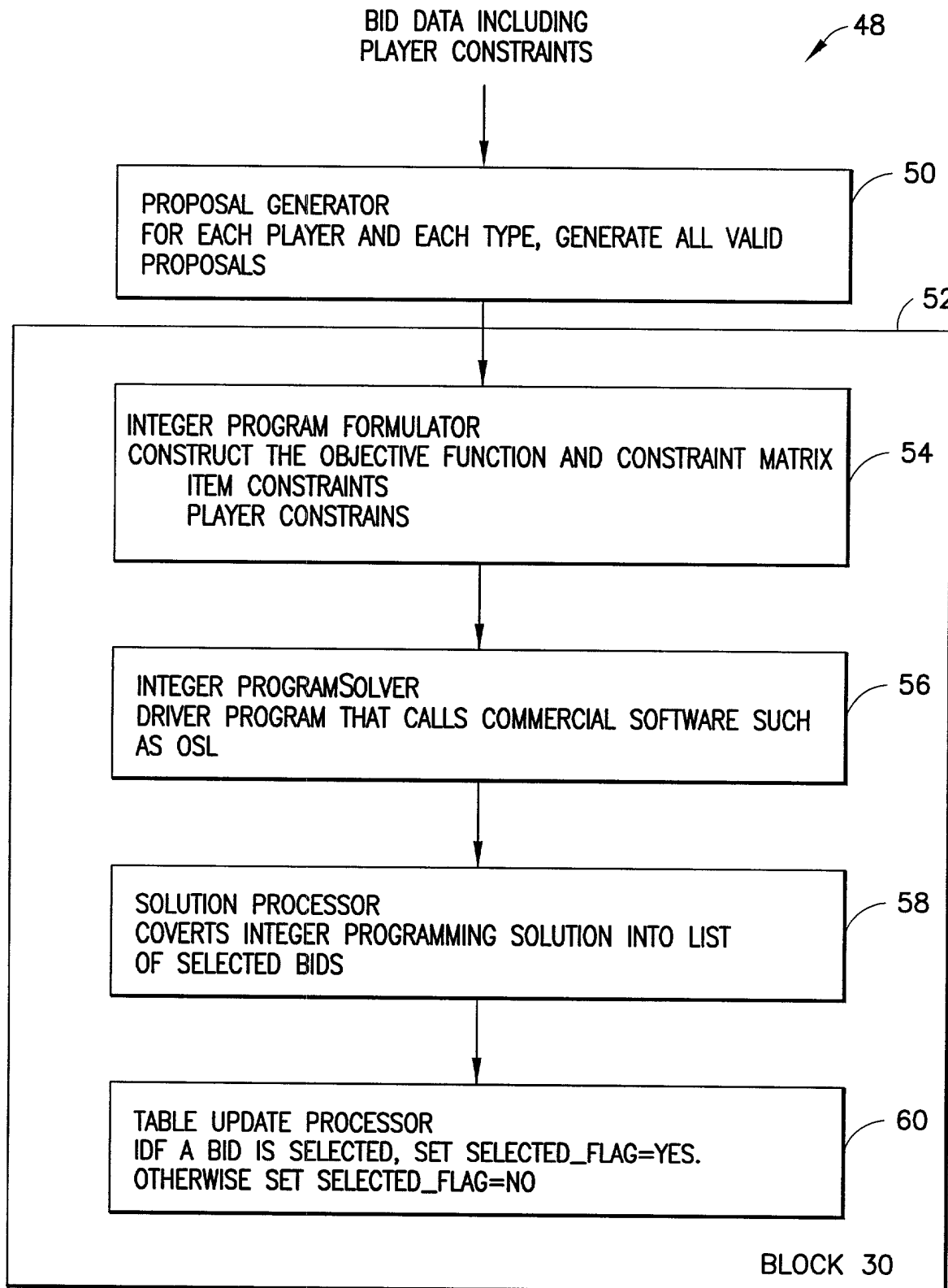


FIG.5

PROPOSAL	ITEMS	VALUE	REJECT?
1	5	29	
2	1,3	114	
3	1,5	122	YES
4	2,4	60	
5	2,5	72	
6	4,5	46	
7	1,2,4	153	
8	1,2,5	165	
9	1,4,5	139	
10	1,2,3,5	182	YES

PLAYER 1'S PROPOSALS

PROPOSAL	ITEMS	VALUE	REJECT?
1	3	43	
2	4	29	
3	5	31	
4	6	12	
5	7	17	
6	3,4	72	YES
7	3,5	74	YES
8	3,6	55	
9	3,7	60	
10	4,5	60	
11	4,6	41	
12	5,6	43	YES
13	6,7	29	YES
14	3,4,5	104	
15	3,6,7	72	

PLAYER 2'S PROPOSALS

FIG.6